

Kia ora, gday and welcome to the History of Aotearoa New Zealand. Episode 111: Nature's Pharmacy. This podcast is recorded in Te Whanganui a Tara on the rohe of Muaūpoko, Taranaki Whānui, Te Atiawa and Ngāti Toa Rangatira. We are generously supported by our amazing Patrons. If you want to support HANZ go to patreon.com/historyaotearoa. Last time we had a long discussion on Māori religion, the mythology, the pantheon and how it operated in practice. Today we are going to follow on from that with the closely connected rongoā Māori, that is medicine. We talked about this a little in episode 108 where Elsdon Best was rather disparaging of Māori medicinal capabilities, to the point where he said that Māori had no herbal remedies or that Māori had no medicinal practices other than exorcism. At the time I didn't have the confidence to say whether this was entirely true, though I did think it was dubious. Well, I can tell you with a fair amount of confidence now that Best was talking out his ass. Māori did have herbal remedies, though in some instances not in the same way that Europeans understood them and although there was a heavy spiritual element to rongoā it would be unfair to say that the only medicinal practice they had was exorcism.

Rongoā Māori is hard to separate from spirituality, unlike contemporary Western medicine where there is a clear distinct line made between religion and science. I think it would be fair to say that generally speaking the Western world doesn't welcome religion in the hospital other than a few exceptional circumstances, almost all of which would involve the oncoming death of the patient. Rongoā Māori on the other hand has religion and spirituality deeply ingrained, right from diagnosis and this aspect of medicine revolves a lot around the wairua, in this case called te taha wairua which literally translates to "the spiritual side or dimension". And although I've said that this is religious, that isn't necessarily what it was, at least not in the sense of what Western cultures might think. In Te Ao Māori, the spiritual health of a person is intrinsically linked to their physical health so healing one is not really done without healing the other. Part of spiritual health is being connected to your whakapapa, one of which is Tāne and by extension the forests, as well as other aspects of the natural world. So to be healthy and in balance is also to be connected to the world around you. This can be applied to a wider level, one example given is if a lake is contaminated with sewage and can't support fish then it is in ill health, which may result in the physical health of the hapū nearby also declining. Additionally, it may also mean that the hapū are unable to provide for manuhiri as they would have in the past, which results in whakamā, shame, which is their spiritual health declining. This idea is also extended to social connections and mental health, all of which can affect spiritual and physical health depending on the circumstances. If you were brought up in the New Zealand school system you may have had this presented as the idea the four walls of a house, with each wall representing your mental, physical, spiritual and emotional health, each one helping to hold up the whole house, you. If one wall falls down or is fragile, it is harder to maintain the house and the other walls are more susceptible to crumbling. That's basically what was going on here. To explain it a slightly different way, the focus of rongoā Māori wasn't the sickness itself, like Western medicine, but rather the person who is sick. It's perhaps a subtle difference but the idea is to be more wholistic in the approach.

This meant that those tohunga who were connected deeply to the atua weren't just priests. They were doctors, nurses, counsellors and therapists all rolled into one, being called tohunga nānā tūpāpaku. They were taught in the whare wānanga and rongoā Māori was considered to be one of the things that Tāne brought back in the kete of knowledge. As such, any breaking of tapu in relation to this knowledge, such as sharing it with outsiders, was an affront to him and in fact Tāne was also the atua who presided over the medicinal plants from the forest so one of his major demesene's was medicine and healing. In the whare wānanga, aspiring tohunga would learn the various karakia used in healing, the plants that go with them, how to prepare and apply them as well as what symptoms

or ailments these would be used for. As you can no doubt guess, women didn't tend to be healers like this as they were noa and weren't admitted into the whare wānanga.

As we talked about in previous episodes, the first step of figuring out how to cure someone was to figure out what tapu you broke or which atua you pissed off as this was considered to be the reason someone would be struck down with disease. This would involve matakite, divination, and once the source of the issue was discovered the tohunga could prescribe a treatment. This treatment would chiefly involve karakia, this was seen as the thing that was actually doing the work of healing. Plants, massage, stretching and other physical remedies would likely have been done as well but these were seen as secondary to the karakia, they just amplified the work that the words were doing. Remember, in Te Ao Māori, words have innate power, especially when said with intention by someone with great mana, which a tohunga always was. Tohunga were required to maintain a certain level of mana to allow their karakia to be able to work. Additionally, if karakia weren't delivered correctly, such as adding or removing a word or messing up the pacing, then this could render the karakia useless in that instance. All of this was important with the idea that the atua was the one doing the healing through the karakia and the tohunga was just the vessel or the connector between the atua and the patient.

We've talked a lot about karakia before though so I won't rehash that here. What I would rather focus on is the more physical aspect. What plants were they using? What ailments were those plants used for? And generally, if you were alive in say 17th century Aotearoa and injured yourself or got sick, what kind of treatments would you potentially see being prescribed. So let's start with some different ailments! Well, by in large Māori were treating most of the same kind of stuff we get today. They would do some healing with cuts, bruises, broken bones, some healing of aches and pains of joints, teeth or throat, healing bowel issues from having not enough movement or having too much movement, as well as some healing of colds, coughs, STDs and even leprosy and tuberculosis. Diseases like influenza, measles and that sort of thing didn't arrive until Europeans came over and much like other indigenous peoples in the world, Māori had no natural defence against them meaning they contracted them easily and a lot of people died. Overall, Europeans recorded that Māori didn't seem to have many really bad diseases and serious illness didn't seem to be widespread, possibly since Māori weren't as urbanised as the increasingly city dwelling Europeans. What we also see once Europeans turn up, is that Māori women were heavily afflicted with introduced diseases as the whalers and sealers coming initially were pretty much always men and so women that had sex with them contracted these diseases more often.

As with most aspects of pre-European Māori life, rongoā wasn't just rote learning of plants and symptoms. There was a lot of tikanga to observe and tapu to not break, such as early morning generally being favoured to gather plants. Acknowledging the mauri, the life force, of the plant being harvested from was common, to show respect to the plant and to harvest from it in a way that would ensure it would continue to live and allow others to harvest from it later. You wouldn't take more leaves than the plant could do without or you wouldn't take more than you need. Taking less and making sure the plant will survive your harvest was key to its survival long term and allow you and others to take from it in the future. Of course there was a lot of regional variation in how or when plants were harvested but what we also find is that some of the same plants can have very different properties depending on where in the country they are gathered from.

For tohunga, having intimate knowledge of the forest was key, knowing how each plant grew or defended itself would help in knowing what it could be useful for. Such as how Europeans later figured out how fungi defend themselves against bacteria which in turn we can use as medicine, such as penicillin. Knowledge of what plants are good for what ailment and how to use or prepare

them was determined over years and even generations of observation. This knowledge would be passed down by two primary methods, both facilitated by the whare wānanga. One was by sitting down in the whare itself and basically be taught in a class. A high ranked tohunga would possibly stand up in front of the apprentices and talk to them about the theory of healing, what karakia to use for what ailment, how to say them and try to get them to remember the lines cause they won't be able to consult a notebook later. They may also cover the various plants, how to prepare them and which karakia to pair them with but a lot of teaching on plants came from the other method. Just being out in the bush, walking with the tohunga and them pointing out plants, showing how to identify them and how to harvest from them in a safe and respectful way. In saying that, the specifics of how Māori applied medicines or how they figured out what worked and what didn't isn't really known since they were apprehensive to share that information with people like Best. But it's fair to say that this form of teaching, a combo of lecturing and outdoor practical work, sounds very similar to my Western scientific university education.

In terms of actual remedies to cure ailments, a tohunga had a lot of methods and plants at his disposal, in particular there were various rituals that would help in recovery. Often these involved water, either sprinkled or poured on a person or just the ritual occurring in a river. Usually plants were placed on the patient or mixed in some way during these ceremonies. Peter Buck suggests that bigger, less obvious ailments were the ones treated mostly with ritual or ceremony and that simple and plain to see issues were treated in a more "rational manner". Such as warts having leaves applied after cooking them or boils were cut open and the core squeezed out with the thumbs. Blood letting was occasionally practiced for alleviating pains, like headaches. If the person was drowning, they would be held by the heels over a fire to get them to inhale the smoke. The water was then able to run out of the body and the sneezing from the smoke would wake them up. If you were lucky enough to live in one of the more geothermally active areas of Aotearoa, hot water baths from natural vents could be used to treat injuries or soreness in the joints or muscles. Cook and Polack both recorded that steam baths were a common way to fix ailments as well. This could be done by heating stones, placing some plants on them and then a whakiri on top of that. The patient would then squat over the mat as the steam rose from the cooking vegetation. Goitre, the swelling of the thyroid gland in the neck due to iodine deficiency, was usually taken as a matter of course in most regions but could be eased by rubbing morning urine on the area with the left hand. This one is actually a bit interesting cause the European population would have the same problem since it was a result of New Zealand's soil not having much iodine in it, meaning the plants didn't either and it wouldn't be until 1924 that table salt was required to be iodised to help avoid this issue.

One thing that does come up a fair amount if you look into this topic is discussions around what kind of medicines Māori used, or whether they used them at all if you look at Elsdon Best's work. In fact, he took it a step further and said the art of medicine was learned from Pākehā as it would "lessen the power of the priests." He says that when Māori learned about the science of medicine, they took to it very quickly and "swallowed any nostrum they could procure, be it ever so vile." These views have subsequently been refuted by modern scholars. Māori did use some medicines but it seems that it may have been limited to external remedies. It's possible that internal remedies, like drinking water infused with leaves or bark, may have only occurred when Europeans arrived though there is evidence to suggest that they did have some medicines that were consumed for abnormal bowel movements.

We also find that some Māori called European missionaries tohunga as they fulfilled a similar role in European society that tohunga did in Aotearoa. This was only further reinforced when they brought with them various medicines and used them on the population, often with great effect, which in turn

helped to convert them to Christianity. Due to the conversion of many people who would have been inducted into the whare wānanga, a lot of the knowledge on medicine and other important topics was lost with the death of 'old time tohunga'. These converts wanted to blend the two schools of thought together, keeping the ideas of tapu but basing their healing and attitude towards medicine on the Bible. This was made a bit harder as missionaries had begun to recontextulise Māori kupu, words, or perhaps it is more accurate to say they reduced them to a singular function. Such as tapu meaning holy, atua became god, karakia into prayer and so on. Which is not exactly incorrect but these words have far wider meanings and understandings than what Europeans ascribe to them, we have already talked about how atua could mean anything from Tānemahuta to a dead ancestor. In a lot of ways though, not a huge amount changed. In some aspects only the god being referred to changed, that of Christ instead of the Big Six.

So before we get into talking about some specific plants and what they were used for I do need to give a small warning. The treatments I'm about to describe were used by Māori to treat ailments for hundreds of years, this does not mean they are safe to do now. Some plants contain poisons or carcinogens that they weren't aware of but we are now. Additionally, do not ingest any plants that you can't 100% identify correctly, some plants can look like other plants, sometimes on purpose as we will soon discuss, and some of those lookalikes are dangerous to your health. Just be sensible, you know? Don't eat something if you don't know what it is, if you have an injury or a disease, see a doctor, go to the hospital. And just to really lay it all out, I will not be held responsible if you, based on the following information, go out, eat something and then get injured. Cool? Cool.

Kawakawa leaves look very similar to that of kava, a sedative that is used throughout the Pacific, even today and in fact it is distantly related to it. Although, kawakawa doesn't quite have the same properties, it does have a lot of other uses. The leaves and roots could be boiled to make a tonic that was used as an aphrodisiac and a treatment for gonorrhoea, worms and issues with the urinary organs. Kawakawa leaves could be added to a bath to help sooth skin conditions and wounds could be wrapped in leaves which were said to help in healing, possibly as an antiseptic. The leaves could be chewed to receive a mild numbing effect and was useful to help ease the pains of toothaches or sore throats with the leaves tasting kinda peppery and bitter. The active chemical that is probably doing most of this work is myristicin which has anti inflammatory, antimicrobial and insecticide properties. It's also the psychoactive chemical in nutmeg and apparently some people have tried to smoke kawakawa leaves to get high but they didn't have much success other than feeling a bit numb! To protect the kūmara crop from caterpillars Māori would burn kawakawa branches in rows between the plants to help ward off insects that might eat it. Interestingly, there is one bug that this didn't work for, the kawakawa looper moth (*Cleora scriptaria*) who has adapted to be resistant to the insecticide properties and in fact prefers to eat kawakawa. This species are the ones leaving the holes in the leaves of kawakawa that you often see. Māori believe that the ones with the most holes are the ones with the most medicine so they are the ones to choose for your remedies, which may have a Western scientific basis in that the eating of the leaves by the moth may have caused them to change their chemical composition as a defence mechanism, meaning an increased concentration of of that active chemical myristicin. Later when Europeans arrived they would brew kawakawa into tea, beer and nowadays you can even find it in gin! Shoutout to The Bond Store distillery on the Kāpiti Coast for their kawakawa gin which is my favourite. The leaves were also used as kīnaki and served with muttonbird. Apart from the leaves, kawakawa has an orange fruit that is tasty and was used as a diuretic.

Horopito is called the pepper tree in English due to the strong peppery taste that you get when you chew the leaves. Again this would be used for sore throats and teeth as it had a mild numbing effect.

Mothers would rub the leaves over the breast to help wean their children off milk since they would be put off by the spiciness. Hot baths infused with leaves and bark of horopito were used to treat a variety of external body conditions and even parasites. Europeans dubbed it 'bushmans painkiller' on account of its, well, pain killing properties. Europeans also brewed it into a tea to help relieve stomach aches, headaches, fever or diarrhoea. Leaves could be placed on cuts to help heal them too, though sometimes this would impart a slight blue tinge to the skin as the underside of the leaf has a blue hue. The chemical responsible for the spicy flavour is polygodial which has antifungal, anti-inflammatory, antibacterial and anti allergic properties. It has also been found to be effective at treating yeast infections and is apparently sold in creams worldwide for that purpose. Funnily enough, deer hate the taste so horopito has become quite dominant in some areas since the deer consume everything else except it. Horopito also has some insect repellent properties, this is due to glands filled with polygodial. When an insect nibbles on the leaf, it may pop the gland, releasing the compound and killing the insect but this also damages the leaf itself leaving the characteristic red patches. This in turn serves as a warning signal to other insects, the more red the leaves, the more polygodial is in them and the more dangerous they are. It seems to have become the language of the forest too, with other plants, who don't contain polygodial, mimicking the same blotchy red leaf pattern. Scientists think this is Batesian mimicry where a harmless species mimics the appearance of a harmful species, which is very rare in the plant world. Horopito is also finding a lot of traction in the food world as an interesting substitute for pepper as well as being in tea and again gin!

Kōwhai is another plant that has a lot of different uses with the bark being the part used the most. Bark would always be harvested from the sunniest side of the tree before being soaked in water that could be used to treat skin disease, dandruff, cuts, bruises, sprains and general aches, among other things. People who broke bones may sit in water infused with kōwhai, called wai kōwhai, to help the bones heal faster. Or travellers with tender feet could soak in the infused water to help toughen them, which gave the skin a light yellow tinge. The water could also be drunk to help relieve constipation, which one source said "the effects of which were rather dramatic". Despite all this, it is not recommended to ingest kōwhai or anything infused with it, it is poisonous! Apparently people have become sick just from eating with cutlery made of the wood or even people eating kerereū who ate the leaves and the poison got into the meat which was said to have smelled funky. One story I found was about a cooper in Bluff who made beer from tī kouka roots. Some whalers came along and feeling a bit rowdy, smashed his stuff and stole his booze, retreating back onto their ship. The barrel maker was naturally very annoyed but formulated a plan. He waited until the ship returned and he boiled kōwhai leaves and flowers into a home brew. He then packed himself up to leave, taking his valuables and left some drinking cups out on the table with his brew. Like clockwork, the whalers came along, broke into his shop and had a drink. When the officers on the ship noticed their men failed to return on time, they went to look for them and found the men "in a state of violent purging; for 12 hours straight they had been erupting from both ends,"

Mānuka is interesting as it is a more recent arrival to Aotearoa, coming here a few million years ago having blown over from Australia. As such, it has some interesting adaptations to fire that other species in New Zealand don't have due to the relative rarity of fire in the Kiwi bush prior to human arrival. Mānuka contains oils that help fire burn hotter and it has a seed dispersal system where capsules of seeds pop open and spread across the ground when they heat up or are exposed to smoke. As such, when Māori were using fire to clear land, mānuka and its cousin kānuka spread across the landscape like, well, wildfire. This created a bit of a loop where the mānuka created bigger, hotter and more frequent forest fires, which spread them around more, which made the fires bigger, which made more mānuka and so on. Meaning plants that did well in an environment of semi regular forest fires were encouraged, which changed Aotearoa's landscape. Mānuka had many uses

not just as a medicine but also in construction of whare or wooden palisades, making small personal items like combs or for tools like hoe, kō, hīnaki and even taiaha. In terms of rongoā, the leaves would be put in water and drunk to reduce fever or treat stomach and urinary issues. The bark was also infused into water to use as a sedative or mouthwash whereas seeds were chewed to treat diarrhoea. The sap or gum that seeped from the branches was eaten to help cure coughs or as a moisturiser for burns. Later Europeans, or maybe at this point it's more accurate to say the British, would make tea from the leaves and it was common for sealers and whalers to drink almost nothing else on their long expeditions. Obviously the thing mānuka is most famous for nowadays is honey.

Puketea is a swampy tree that has some interesting adaptations to living in that environment, such as growing pneumatophores which are essentially biological snorkals that allow submerged roots to breathe. The bark of the puketea was a strong painkiller, being infused with water and rubbing it on sores, ulcers, eczema and other skin conditions, which would almost instantly numb the area and relieve the pain. It could also be drunk to help cure STDs and ulcers in the mouth. Alternately the bark could be chewed for the same effect. The chemical that does this is pukateine, an alkaloid that has similar properties to morphine, though apparently with none of the downsides. This has led scientists to look more into its potential application in Western medicine, possibly around Parkinsons disease, hypertension and TB. The morphine like qualities have also led people to try and get high off it, smoking, drinking or otherwise trying to consume the bark. So far no one has reported it being successful other than getting a numb mouth or throat. Apparently, there was some suggestions that pukateine causes convulsions in rabbits and that it was poisonous to sheep and rats, so there could be potential applications in native conservation as well. The wood was also used for small items like bowls, hoe and even figureheads for waka by Māori. It became waterlogged easily though so it wasn't good for larger projects. Another interesting use is that when the trees age they often leave a hollow in the middle of the trunk with Māori sometimes placing the bodies of dead relatives in these hollows, possibly if there wasn't a cave nearby for the pupose. Sometimes getting people into the tree would require lifting them up 10-20 metres off the ground.

Kūmarahou is a tree that doesn't really look like much with dull green leaves and small clusters of little yellow flowers. But it's a hardy plant that can survive in lots of different environments, particularly barren areas leading Europeans to call it 'poverty weed'. It is also called gumdiggers soap since it was quite prominent in the former kauri forests where the gumdiggers were looking for kauri gum. What they found was that if you take the flowers, add a little water and rub them in your hands you get a soapy lather, which was pretty great when you're in the middle of nowhere, far away from a shower! Apparently it was pretty good not just for general dirt and grime but also getting rid of the kauri resin that would stick to them very strongly. This property is from the flowers containing compounds called saponins, which are found in some detergents today. The leaves could also be infused with water to cure chesty coughs, colds, heartburn and asthma, among other things. The tonic could also be applied to cuts to help heal them. By now you're probably seeing a trend with all these plants and I can't believe this either but, yes, the British in their infinite quest for hot leaf juice did turn the literal soap plant into tea, though its quite bitter and usually needs a sweetener.

Next time, we will be our end of topic dramatic retelling, possibly something that fits with our last episode on creatures of Māori folklore. After that we will be delving into our final pre-European topic. The House of Tūmatauenga. War.

If you want to send me feedback, ask a question, suggest a topic or just have a chinwag you can find my email and social media on historyaotearoa.com. You can also find helpful resources there like transcripts, sources and translations for some of the Te Reo Māori we have used. You can help

support HANZ through Patreon, buying merch or giving us a review, it means a lot and helps spread the story of Aotearoa New Zealand. As always, haere tū atu, hoki tū mai. See you next time!

Episode 113

Kia ora, gday and welcome to the History of Aotearoa New Zealand. Episode 113: Rongoā Māori with Donna Kerridge. This podcast is recorded in Te Whanganui a Tara on the rohe of Muaūpoko, Taranaki Whānui, Te Atiawa and Ngāti Toa Rangatira. We are generously supported by our amazing Patrons. If you want to support HANZ go to patreon.com/historyaotearoa. Today I have something very exciting to share with you! In episode 111 we heard about what rongoā Māori was like hundreds of years ago but rongoā, as with all of Māori culture, is still alive and thriving today. So how is Māori medicine applied in a more modern context? To answer that question I reached out to the knowledgeable Donna Kerridge. Donna is a rongoā Māori practitioner and founder of Ora New Zealand, a company that delivers “organisational hauora Māori policy and advisory services, presentations and training programs”. She has spent the last decade or so advising the government on policy related to rongoā Māori, which most recently has been in relation to the Therapeutic Products Bill, which we will discuss later in the episode. Apologies in advance if there are any audio issues, we had some technical problems that meant we had to record on Zoom so if the audio is less than ideal, that’s why. But hopefully that doesn’t detract too much from the amazing knowledge that Donna has to share. Enjoy!

Once again I would like to thank Donna for taking the time out of her day to come onto the podcast, it’s a real privilege to speak to someone who knows so much more than me and I hope you learned as much as I did! If you want to take a look at what Donna does, I have linked to Ora New Zealand’s website in the show notes. If you want to send me feedback, ask a question, suggest a topic or just have a chinwag you can find my email and social media on historyaotearoa.com. You can also find helpful resources there like transcripts, sources and translations for some of the Te Reo Māori we have used. You can help support HANZ through Patreon, buying merch or giving us a review, it means a lot and helps spread the story of Aotearoa New Zealand. As always, haere tū atu, hoki tū mai. See you next time!